

=> b hcaplus
FILE 'HCAPLUS' ENTERED AT 10:34:03 ON 06 AUG 2004
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FILE COVERS 1907 - 6 Aug 2004 VOL 141 ISS 6
FILE LAST UPDATED: 4 Aug 2004 (20040804/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que 138

L20	818	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	"INTESTINAL BACTERIA(L) PROBIOTIC"/CT OR PROBIOTICS/CT
L21	1969	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?PROBIOTIC?/BI OR L20
L22	14077	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	LACTOBACILLUS+NT/CT
L23	2834	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BIFIDOBACTERIUM+NT/CT
L24	16997	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L21 OR L22 OR L23
L25	383	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	ALGINATE/CNS
L26	18995	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L25
L27	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	"ALGINIC ACID"/CN
L28	18995	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L27 OR L26
L29	137	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L24 AND L28
L37	53	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L29 AND P/DT
L38	20	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?CAPSUL?/BI AND L37

=> b medl
FILE 'MEDLINE' ENTERED AT 10:34:13 ON 06 AUG 2004
FILE LAST UPDATED: 5 AUG 2004 (20040805/UP). FILE COVERS 1951 TO DATE.

On February 29, 2004, the 2004 MeSH terms were loaded. See HELP RLOAD for details. OLDMEDLINE now back to 1951.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2004 vocabulary. See <http://www.nlm.nih.gov/mesh/> and http://www.nlm.nih.gov/pubs/techbull/nd03/nd03_mesh.html for a description of changes.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 147

L39	1390	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	PROBIOTICS/CT
L41	9123	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	LACTOBACILLUS+NT/CT

=> b hcaplus

FILE 'HCAPLUS' ENTERED AT 10:02:26 ON 06 AUG 2004

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FILE COVERS 1907 - 6 Aug 2004 VOL 141 ISS 6

FILE LAST UPDATED: 4 Aug 2004 (20040804/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que 133

L33 9 SEA FILE=HCAPLUS ABB=ON PLU=ON "PORUBCAN RANDOLPH S"/AU

=> d all 133 1-9

L33 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:717326 HCAPLUS

DN 139:245319

ED Entered STN: 12 Sep 2003

TI Manure- and Bacillus-based fertilizer compositions

IN **Porubcan, Randolph S.**

PA Microbes, Inc., USA

SO U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM C05F011-08

NCL 071006000

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003167811	A1	20030911	US 2001-38676	20011231
PRAI	US 2001-38676		20011231		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003167811	ICM	C05F011-08
	NCL	071006000

AB Fertilizer compns. are described, comprised of decontaminated manure and Bacillus spores, preferably a humic acid derived from lignite and, optionally, one or more of N, P and/or K compds., and combinations of

≥2 of these compds. Preferred compns. are those wherein the ingredients are blended into an admixt. resulting in a granular product. Other preferred compns. are those blended into an admixt. resulting in a powdered product. Preferably, the ingredients are formed into hardened prills or pellets.

ST manure Bacillus spore fertilizer compn

IT Bacillus licheniformis

Bacillus subtilis

Brevibacillus laterosporus

Manure

(fertilizer compns. containing)

IT Superphosphates

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(fertilizer compns. containing)

IT Coal components

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(leonardite; fertilizer compns. containing)

IT Humic acids

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(lignite-derived; fertilizer compns. containing)

IT Fertilizers

RL: AGR (Agricultural use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)

(manure- and Bacillus-based fertilizer compns.)

IT Humic acids

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(potassium salts; fertilizer compns. containing)

IT Bacillus (bacterium genus)

(spores; fertilizer compns. containing)

IT 57-13-6, Urea, biological studies 6484-52-2, Ammonium nitrate, biological studies 7440-09-7, Potassium, biological studies 7631-99-4, Sodium nitrate, biological studies 7632-05-5, Sodium phosphate 7723-14-0, Phosphorus, biological studies 7727-37-9, Nitrogen, biological studies 7757-79-1, Potassium nitrate, biological studies 7758-23-8, Monocalcium phosphate 7758-87-4, Tricalcium phosphate 7778-80-5, Potassium sulfate, biological studies 7783-20-2, Ammonium sulfate, biological studies 10124-31-9, Ammonium phosphate 10124-37-5, Calcium nitrate 16068-46-5, Potassium phosphate

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(fertilizer compns. containing)

L33 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:413865 HCAPLUS

DN 138:384696

ED Entered STN: 30 May 2003

TI Administering Bacillus laterosporus to increase poultry feed conversion and weight gain

IN **Porubcan, Randolph S.**

PA Microbes, Inc., USA

SO U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM A61K038-48

ICS A23K001-00

NCL 424093460; 426053000; 426002000

CC 18-6 (Animal Nutrition)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003099624	A1	20030529	US 2002-128186	20020423
PRAI	US 2001-303196P	P	20010705		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	US 2003099624	ICM	A61K038-48
		ICS	A23K001-00
		NCL	424093460; 426053000; 426002000
AB	Disclosed is a process for improving feed conversion and weight gain in poultry, including chickens, wherein <i>Bacillus laterosporus</i> , or any microorganism with a similar index, based on its cellular fatty acid profile of >0.5 to <i>Bacillus laterosporus</i> (including <i>Bacillus laterosporus</i> strain CM-33 (ATCC Accession Number PTA-3952)) is administered to poultry. Strain CM-33 of <i>Bacillus laterosporus</i> was isolated from soil and has a similarity index of 76% to <i>Bacillus laterosporus</i> . The administration of strain CM-33 is preferably divided into daily doses of about 2.0 million colony forming units (cfu)/day and continued for about 40 days of the growth cycle. The cells or spores can be administered through the bird's drinking water or by other methods, including spraying them onto the bird's feed.		
ST	poultry feed <i>Bacillus</i> growth promoter		
IT	<i>Brevibacillus laterosporus</i>		
	Coccidiostats		
	Feed additives		
	Feeding experiment		
	<i>Gallus domesticus</i>		
	Poultry		
	Soybean (<i>Glycine max</i>)		
	Spore		
	<i>Zea mays</i>		
	(administering <i>Bacillus laterosporus</i> to increase poultry feed conversion and weight gain)		
IT	Fatty acids, biological studies		
	Growth factors, animal		
	RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)		
	(administering <i>Bacillus laterosporus</i> to increase poultry feed conversion and weight gain)		
IT	<i>Gallus domesticus</i>		
	(broiler; administering <i>Bacillus laterosporus</i> to increase poultry feed conversion and weight gain)		
IT	22373-78-0, Coban		
	RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)		
	(administering <i>Bacillus laterosporus</i> to increase poultry feed conversion and weight gain)		

L33 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:172876 HCAPLUS
 ED Entered STN: 07 Mar 2003
 TI *Bacillus laterosporus* strain cm-3 for promoting grain crop yields
 IN **Porubcan, Randolph S.**
 PA Microbes, Inc., USA
 SO U.S. Pat. Appl. Publ.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM A01N063-00

NCL 504117000

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003045428	A1	20030306	US 2002-101344	20020319
PRAI	US 2001-303215P	P	20010705		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 20030045428	ICM	A01N063-00
	NCL	504117000

AB Disclosed are processes for increasing the yields of grain crops, e.g., rice, corn, alfalfa, oats, wheat, barley, hops, and the like, through application of spores or live cells of strain CM-3 of *Bacillus laterosporus* (deposited at the American Type Culture Collection, P.O. Box 1549, Manassas Va. 20108, under Deposit Designation Number PTA-3593). Application of spores of strain CM-3 to rice plants at between 0.6 trillion to 50 trillion (0.6+10¹² "up" to 5.0+10¹³ "up") colony forming units ("cfu")/hectare ("ha")/crop cycle, substantially increased the yield of grain/ha, up to 7.3 metric tons/ha. The applications of strain CM-3 to rice plants can be started during the nursery period, before the plants are placed in the rice paddy.

L33 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:637853 HCAPLUS

DN 113:237853

ED Entered STN: 22 Dec 1990

TI Membrane-forming veterinary antibacterial teat dip

IN Brokken, Kyle; **Porubcan, Randolph S.**

PA Quali Tech, Inc., USA

SO U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 62,278, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-205

ICS A61K031-195; A61K035-78

NCL 514517000

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4945110	A	19900731	US 1989-339197	19890414
PRAI	US 1987-62278		19870615		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4945110	ICM	A61K031-205
	ICS	A61K031-195; A61K035-78
	NCL	514517000

AB A viscosity-stabilized, aqueous topically adherent, self-supporting film-forming veterinary antibacterial composition effective for the control of bovine mastitis, comprises (1) an aliphatic sulfate or sulfonate salt detergent 4-8%, (2) lactic acid or its salt 0.01-10%, (3) a bactericidal organic acid selected from benzoic acid, sorbic acid, citric acid, lower alkanolic acids, salts or mixts. thereof 0.001-0.100%, (4) a film-forming pectin or gum 0.02-2.5%, and (5) a water-soluble C₆ aliphatic polyol emollient. The composition is topically applied to the teats and udder

quarters of bovine animals and dried to form a flexible protective film-forming antibacterial barrier. A solution containing Na benzoate 0.05, sorbic acid 0.05, and FD&C blue number 1 0.0601lb and a solution containing citrus pectin 18.000, Na lauryl sulfate (29% aqueous solution) 172.414, and lactic acid (88% aqueous solution) 10.000lb were mixed along with 50lb glycerin. The solution exhibited 99.95% growth inhibition of Escherichia coli on the teat of dairy cows.

ST bovine mastitis antibacterial soln sulfate lactate; teat dip mastitis antibacterial carboxylate detergent

IT Mastitis (control of, antibacterial carboxylic acid-containing teat dip solution for)

IT Gums and Mucilages (veterinary antibacterial topical solution containing, as film-forming agent, in bovine mastitis prevention)

IT Detergents Carboxylic acids, biological studies Sulfonates RL: BIOL (Biological study) (veterinary antibacterial topical solution containing, for mastitis prevention)

IT Alcohols, biological studies RL: BIOL (Biological study) (polyhydric, veterinary antibacterial topical solution containing, as emollient, in bovine mastitis prevention)

IT Pharmaceutical dosage forms (solns., topical, sulfate detergent and antibacterial carboxylic acid in, as teat dip, for mastitis control)

IT 9046-38-2D, Polygalacturonic acid, methoxylated derivs. RL: BIOL (Biological study) (from citrus peel, veterinary antibacterial topical solution containing, as film-forming agent, in bovine mastitis prevention)

IT 50-70-4, Sorbitol, biological studies 56-81-5, Glycerin, biological studies 57-55-6, Propylene glycol, biological studies 107-21-1, Ethylene glycol, biological studies RL: BIOL (Biological study) (veterinary antibacterial topical solution containing, as emollient, in bovine mastitis prevention)

IT 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-69-5, Pectin RL: BIOL (Biological study) (veterinary antibacterial topical solution containing, as film-forming agent, in bovine mastitis prevention)

IT 50-21-5, Lactic acid, biological studies 65-85-0, Benzoic acid, biological studies 77-92-9, Citric acid, biological studies 110-44-1, Sorbic acid 151-21-3, Sodium lauryl sulfate, biological studies 151-41-7D, salts 532-32-1, Sodium benzoate 7664-93-9D, Sulfuric acid, alkyl esters, salts RL: BIOL (Biological study) (veterinary antibacterial topical solution containing, for mastitis prevention)

DN 107:57718
 ED Entered STN: 21 Aug 1987
 TI Wort-sequestered divalent metal salts
 IN Brokken, Kyle A.; Porubcan, Randolph S.
 PA Quali Tech, Inc., USA
 SO PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A23K001-06
 ICS A23K001-175
 CC 17-6 (Food and Feed Chemistry)
 Section cross-reference(s): 19
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8701012	A1	19870226	WO 1986-US1697	19860818
	W: JP				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	US 4661358	A	19870428	US 1985-768961	19850823
	EP 235252	A1	19870909	EP 1986-905519	19860818
	EP 235252	B1	19910410		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 63500635	T2	19880310	JP 1986-504607	19860818
	AT 62381	E	19910415	AT 1986-905519	19860818
	CA 1301527	A1	19920526	CA 1987-527216	19870113
PRAI	US 1985-768961		19850823		
	EP 1986-905519		19860818		
	WO 1986-US1697		19860818		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 8701012	ICM	A23K001-06
	ICS	A23K001-175

AB A water-dispersible composition containing added nutrient divalent metal ions sequestered by an alkali-modified brewer's wort is provided which is useful as a trace element source for animal feeds and fertilizers. Brewer's wort 30 weight% was added to a liquid mixer and stirred at .apprx.15-32°. The pH was adjusted to 11.0 by slow addition of NaOH 1.3 weight%. The conditioned wort was then pumped into a dry mixer containing CuSO4 40 weight%, and hydrated silica 27.7 weight% was added to yield a damp, free-flowing powder, which was dried at 205° to a final moisture level of 4-6%. The dry product was ground and combined with polysorbate 80 1.0 weight% in a dry mixer to yield the final product. When analyzed using a cupric ion-specific electrode, 75-100% of the Cu was bound to the matrix. The Cu of this composition had 2- and 4-fold the bioavailability of CuSO4 and CuO in tests with rats, and it had good storage stability.

ST trace element stabilization wort feed fertilizer; premix feed trace element wort; sequestration trace element wort feed fertilizer

IT Trace elements, biological studies
 RL: BIOL (Biological study)
 (divalent, sequestration of, with alkali-modified wort, for water-dispersible stable feed and fertilizer additives)

IT Surfactants
 (polysorbate, trace element water-dispersible stable compns. containing, for feed and fertilizers)

IT Feed
 Fertilizers

RL: BIOL (Biological study)
(trace element water-dispersible stable additives for)

IT Worts
(trace elements sequestration with alkali-modified, in
water-dispersible stable feed and fertilizer additives manufacture)

IT Alkali metal hydroxides
RL: BIOL (Biological study)
(trace elements sequestration with wort modified with, in
water-dispersible stable feed and fertilizer additives manufacture)

IT Metals, biological studies
RL: BIOL (Biological study)
(divalent, sequestration of, with alkali-modified wort, for
water-dispersible stable feed and fertilizer additives)

IT Surfactants
(nonionic, trace element water-dispersible stable compns. containing, for
feed and fertilizers)

IT 7631-86-9D, Silica, hydrated
RL: BIOL (Biological study)
(filler, trace element water-dispersible stable compns. containing, for
feed and fertilizers)

IT 1343-98-2
RL: BIOL (Biological study)
(filler, true element water-dispersible stable compns. containing, for feed
and fertilizers)

IT 7439-89-6, Iron, biological studies 7439-95-4, Magnesium, biological
studies 7439-96-5, Manganese, biological studies 7440-48-4, Cobalt,
biological studies 7440-50-8, Copper, biological studies 7440-66-6,
Zinc, biological studies 7733-02-0, Zinc sulfate 7758-98-7, biological
studies 7785-87-7, Manganese sulfate
RL: BIOL (Biological study)
(sequestration of, with alkali-modified wort, for water-dispersible
stable feed and fertilizer additives)

IT 7664-93-9D, Sulfuric acid, metal salts
RL: PROC (Process)
(sequestration of, with alkali-modified wort, in trace element
water-dispersible stable additives manufacture for feed and fertilizer)

IT 9005-65-6, Polysorbate 80
RL: BIOL (Biological study)
(trace element water-dispersible stable compns. containing, for feed and
fertilizers)

IT 1310-73-2, Sodium hydroxide, biological studies
RL: BIOL (Biological study)
(trace elements sequestration with wort modified with, in
water-dispersible stable feed and fertilizer additives manufacture)

L33 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1981:119769 HCAPLUS
DN 94:119769
ED Entered STN: 12 May 1984
TI Culture concentrates for direct vat set cheese production
IN **Porubcan, Randolph S.**; Sellars, Robert L.
PA Hansen's Chr., Laboratory, Inc., USA
SO Can., 21 pp.
CODEN: CAXXA4
DT Patent
LA English
IC C12K003-00; C12B001-26; A23C019-02
CC 17-3 (Foods)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 1092040	A1	19801223	CA 1978-300177	19780331
	US 4115199	A	19780919	US 1977-793483	19770504
	GB 1552909	A	19790919	GB 1978-13366	19780405
	AU 7834813	A1	19791011	AU 1978-34813	19780405
	AU 517009	B2	19810702		
	DE 2817326	A1	19781116	DE 1978-2817326	19780420
	DK 7801904	A	19781105	DK 1978-1904	19780502
	SE 7805145	A	19781105	SE 1978-5145	19780503
	NL 7804815	A	19781107	NL 1978-4815	19780503
	NO 7801580	A	19781107	NO 1978-1580	19780503
	FR 2389673	A1	19781201	FR 1978-13170	19780503
PRAI	US 1977-793483		19770504		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CA 1092040	IC	C12K003-00IC C12B001-26IC A23C019-02
AB		Improved separation of lactic acid bacteria, used in cheese manufacture, from culture media by centrifugation is obtained by adding polyphosphate to the mixture Thus, 450 gal medium containing 6% milk solids, 1% glucose and 1% yeast extract was inoculated with a mixed subculture of Streptococcus lactis and S. cremoris and incubated for 10-12 h. The culture was then treated with Na hexametaphosphate to 2% and centrifuged. A 20-fold concentration of bacteria was obtained and 360 mL of the concentrate was used to inoculate 5000 lb of milk for Cheddar cheese manufacture
ST		cheese bacteria concn polyphosphate; lactic acid bacteria concn polyphosphate
IT		Leuconostoc cremoris Streptococcus cremoris Streptococcus diacetylactis Streptococcus lactis (concentration of, for cheese manufacture, polyphosphate improvement of)
IT		Cheese (manufacture of, starter bacteria concentration in, polyphosphate improvement of)
IT		Bacteria (lactic acid, concentration of, for cheese manufacture, polyphosphate improvement of)
IT		7758-29-4 10124-56-8 RL: BIOL (Biological study) (lactic acid bacteria concentration in presence of, for cheese manufacture)
L33		ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN		1979:573410 HCAPLUS
DN		91:173410
ED		Entered STN: 12 May 1984
TI		Lactic starter culture concentrates
AU		Porubcan, Randolph S. ; Sellars, Robert L.
CS		Chr. Hansen's Lab. Inc., Milwaukee, WI, 53706, USA
SO		Microb. Technol. (2nd Ed.) (1979), Volume 1, 59-92. Editor(s): Peppler, Henry J.; Perlman, D. Publisher: Academic, New York, N. Y. CODEN: 41NCAU

DT Conference; General Review
LA English
CC 17-0 (Foods)
AB A review with 75 refs.
ST review lactic bacteria starter conc
IT Bacteria
(lactic acid, concentrated starter cultures of)

L33 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1978:117001 HCAPLUS
DN 88:117001
ED Entered STN: 12 May 1984
TI A laser Raman study of lysozyme denaturation
AU **Porubcan, Randolph S.**; Watters, Kenneth L.; McFarland, James T.
CS Dep. Chem., Univ. Wisconsin, Milwaukee, WI, USA
SO Archives of Biochemistry and Biophysics (1978), 186(2), 255-64
CODEN: ABBIA4; ISSN: 0003-9861
DT Journal
LA English
CC 7-5 (Enzymes)
AB The Raman spectrum of chemical denatured lysozyme was studied. The denaturants studied included Me₂SO, LiBr, guanidine-HCl, Na dodecyl sulfate, and urea. The intensity of the amide III band at 1260 cm⁻¹ (assigned to strongly H-bonded α -helix structure) relative to the intensity of the amide III band near 1240 cm⁻¹ (assigned to less strongly H-bonded groups) was used as a parameter for comparison with other phys. parameters used to assess denaturation. The correlation between this Raman parameter and denaturation as evidenced by enzyme activity and viscosity measurements is good, leading to the conclusion that the amide III Raman spectrum is useful for assessing the degree of denaturation. The Raman spectrum clearly depends on the type of denaturant employed, suggesting that there is not one unique denatured state for lysozyme. The data, as interpreted, place constraints on the possible models for lysozyme denaturation. One of these is that the simple 2-state model does not seem consistent with the observed Raman spectral changes.
ST lysozyme denaturation Raman
IT Raman spectra
(of lysozyme, denaturation in relation to)
IT 50-01-1 57-13-6, properties 67-68-5, properties 151-21-3, properties 7550-35-8
RL: BIOL (Biological study)
(denaturation of lysozyme by, Raman spectra of)
IT 9001-63-2
RL: PROC (Process)
(denaturation of, Raman spectra of)

L33 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1976:15675 HCAPLUS
DN 84:15675
ED Entered STN: 12 May 1984
TI Stabilized dry cultures of lactic acid-producing bacteria
IN **Porubcan, Randolph S.**; Sellars, Robert L.
PA Hansen's, Chr., Laboratory, Inc., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
IC C12K

NCL 195059000

CC 16-1 (Fermentations)

Section cross-reference(s): 17

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3897307	A	19750729	US 1974-517371	19741023
	CA 1041929	A1	19781107	CA 1975-223858	19750404
	AU 7580144	A1	19760617	AU 1975-80144	19750415
	BE 828181	A1	19750818	BE 1975-155610	19750421
	GB 1469218	A	19770406	GB 1975-18243	19750501
	NL 7505227	A	19760427	NL 1975-5227	19750502
	NO 7501586	A	19760426	NO 1975-1586	19750505
	DK 7501999	A	19760424	DK 1975-1999	19750506
	DE 2520128	A1	19760429	DE 1975-2520128	19750506
	FR 2299404	A1	19760827	FR 1975-14218	19750506
	CH 596302	A	19780315	CH 1975-5828	19750508
	SE 7507580	A	19760426	SE 1975-7580	19750702
	SE 422079	B	19820215		
	SE 422079	C	19820527		
PRAI	US 1974-517371		19741023		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3897307	IC	C12K
	NCL	195059000

AB The viability decline in dried cultures of lactic acid-producing bacteria was arrested by adding to the culture free acids or salts of ascorbic acid with either glutamic acid or aspartic acid prior to drying. Thus, Lactobacillus helveticus viable counts per g decreased from $47 + 108$ to $<1.0 + 107$ after 3 months in untreated freeze-dried cultures whereas cultures treated with ascorbic acid 40, monosodium glutamate 25, and inositol 25 g and pH adjusted to 6.10 with 50% NaOH prior to freeze-drying experienced a decline of only $55 + 108$ to $36 + 108$ viable cells/g in the same time period.

ST lactate bacteria freeze dry stabilization; ascorbate stabilization bacteria freeze dry; glutamate stabilization bacteria freeze dry; aspartate stabilization bacteria freeze dry

IT Bacteria
(lactic acid, stabilization of viability of dry cultures of)

IT Freeze drying
(of lactic acid bacteria, ascorbate, aspartate, and glutamate stabilization of viability in)

IT 50-81-7, biological studies 56-84-8, biological studies 56-86-0, biological studies 142-47-2 3792-50-5

RL: BIOL (Biological study)
(lactic acid bacteria viability stabilization with, during drying)

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